

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for producing a vic-dichloro acid fluoride compound comprising:

fluorinating ~~the following~~ compound (I) in a liquid phase to form ~~the following~~ compound (II), and

dissociating an ester bond of the compound (II) to form ~~the following~~ compound (III), or ~~the following~~ compound (III) and ~~the following~~ compound (IV);

wherein compounds (I), (II), (III) and (IV) have the following formulas:

$(R^{H1} — E^{H1} —) CR^{H2} R^{H3} CH_2 — OCOR^{HB}$ (I),

$(CF_2 C1CFC1 — E^{F1} —) CR^{F2} R^{F3} CF_2 — OCOR^{FB}$ (II),

$(CF_2 C1CFC1 — E^{F1} —) CR^{F2} R^{F3} COF$ (III), and

$FCOR^{FB}$ (IV),

wherein,

R^{H1} is $CX^1X^2ClCX^3C1$ or $CClX^4=CC1$, wherein each of X^1 - X^4 is independently a hydrogen atom or a fluorine atom,

R^{H2} , and R^{H3} are each, independently, is a hydrogen atom, a fluorine atom, a monovalent saturated hydrocarbon group, a halogeno monovalent saturated hydrocarbon group, a hetero atom-containing monovalent saturated hydrocarbon group or a halogeno (hetero atom-containing monovalent saturated hydrocarbon) group,

E^{H1} is a bivalent connecting group or a single bond,

E^{F1} is a group corresponding to E^{H1} , and when E^{H1} is a single bond, E^{F1} is a single bond, and when E^{H1} is a bivalent connecting group having one or more hydrogen atoms, E^{F1}

is a group corresponding to E^{H1} wherein at least one hydrogen atom is fluorinated, and when E^{H1} is a bivalent connecting group having no hydrogen atom, E^{F1} is the same group as E^{H1} ,

R^{HB} : is a monovalent saturated hydrocarbon group, a halogeno monovalent saturated hydrocarbon group, a hetero atom-containing monovalent saturated hydrocarbon group or a halogeno(hetero atom-containing monovalent saturated hydrocarbon) group,

R^{F2} , R^{F3} , and R^{FB} are as follows:

R^{F2} is a fluorinated R^{H2} group,

R^{F3} is a fluorinated R^{H3} group,

R^{FB} is a fluorinated R^{HB} group,

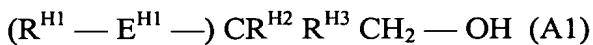
provided that, when one or more hydrogen atom(s) are present in R^{H2} , R^{H3} or R^{HB} , R^{F2} , R^{F3} or R^{FB} is a group corresponding to R^{H2} , R^{H3} and R^{HB} , respectively, wherein at least one hydrogen is fluorinated, and when no hydrogen atom is present in R^{H2} , R^{H3} or R^{HB} , then R^{F2} , R^{F3} or R^{FB} is a group corresponding to R^{H2} , R^{H3} or R^{HB} respectively.

Claim 2 (Currently Amended): The process according to Claim 1, wherein a molecular weight of the compound (I) is ranges from 200 300 to 1000 and the fluorine content is ranges from 30 to 86 mass %.

Claim 3 (Currently Amended): The process according to of Claim 1, wherein the fluorination reaction is carried out by feeding an excess equivalent amount of fluorine relative to hydrogen atoms in the compound (I) into the liquid phase to form the compound (II) from the compound (I) in a liquid phase.

Claim 4 (Currently Amended): The process according to of Claim 1, wherein a C-H bond-containing compound is present in the reaction system of fluorination in a liquid phase, or the fluorination reaction is carried out under radiation of ultra violet ray.

Claim 5 (Currently Amended): The process according to of Claim 1, wherein the compound (I) is produced by reacting the following compound (A1) with the following compound (A2), provided that X is a halogen atom, and R^{H1} , E^{H1} , R^{H2} and R^{H3} have the same meaning as in Claim 1, wherein (A1) and (A2) have the following formulas:



Claim 6 (Currently Amended): The process according to of Claim 1, wherein a compound (Ia), which is the compound (I) wherein R^{H1} is $CX^1X^2C1CX^3C1-$, is produced by reacting the following compound (B1) with the following compound (B2) to form the following compound (B3), and then

reacting the compound (B3) with a chlorinating agent,

provided that wherein X^1 , X^2 , X^3 , E^{H1} , R^{H2} , R^{H3} and R^{HB} have the same meanings as

in Claim 1, and

wherein (B1), (B2), (B3) and (Ia) have the following formulas:



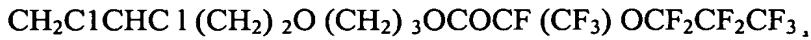
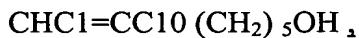
Claim 7 (Currently Amended): The process ~~according to~~ of Claim 6, wherein the chlorinating agent is chlorine.

Claim 8 (Currently Amended): The process ~~according to~~ of Claim 6, wherein the compound (IV) and the compound (B2) are the same compound.

Claim 9 (Currently Amended): The process ~~according to~~ of Claim 5, wherein the compound (IV) and the compound (B2) are the same compound and a part or whole of the resulting compound (IV) is used again for the reaction ~~the~~ with compound (A1) or ~~the~~ compound (B1).

Claim 10 (Currently Amended): The process ~~according to~~ of Claim 1, wherein the compound (III) and the compound (IV) are the same compound.

Claim 11 (Currently Amended): ~~Any one of new compounds~~ A compound represented by any one of the following formulae:



CClF2CClFO(CF2)4COF

CF2CICFC1(CF2)2O(CF2)2COF2

Claim 12 (New): The method of Claim 1, wherein R^{H1} is $CX^1X^2ClCX^3C1^-$.

Claim 13 (New): The method of Claim 1, wherein R^{H1} is $CClX^4=CC1^-$.

Claim 14 (New) The method of Claim 1, wherein E^{H1} is a bivalent connecting group.

Claim 15 (New): The method of Claim 1, wherein E^{H1} is a single bond.

Claim 16 (New) The method of Claim 1, wherein R^{H2} and R^{H3} are halogeno groups containing one or more halogen atoms other than fluorine.

Claim 17 (New) The method of Claim 1, wherein R^{H2} and R^{H3} are not halogeno groups.

Claim 18 (New) The method of Claim 1, wherein R^{H2} is a monovalent saturated hydrocarbon group, a halogeno monovalent saturated hydrocarbon group, a hetero atom-containing monovalent saturated hydrocarbon group or a halogeno (hetero atom-containing monovalent saturated hydrocarbon) group.

Claim 19 (New) The method of Claim 1, wherein R^{H3} is a monovalent saturated hydrocarbon group, a halogeno monovalent saturated hydrocarbon group, a hetero atom-

containing monovalent saturated hydrocarbon group or a halogeno (hetero atom-containing monovalent saturated hydrocarbon) group.

Claim 20 (New): The method of Claim 1, wherein R^{HB} is a monovalent saturated hydrocarbon group.

Claim 21 (New): The method of Claim 1, wherein R^{HB} is a halogeno monovalent saturated hydrocarbon group.

Claim 22 (New): The method of Claim 1, wherein R^{HB} is a hetero atom-containing monovalent saturated hydrocarbon group.

Claim 23 (New): The method of Claim 1, wherein R^{HB} is a halogeno(hetero atom-containing monovalent saturated hydrocarbon) group.

Claim 24 (New): The method of Claim 1, wherein the decomposition of the ester bond of compound (II) is conducted in the absence of solvent.

Claim 25 (New): The method of Claim 1, wherein the reaction temperature for the fluorination reaction ranges from -50 to +100°C.

Claim 26 (New): The method of Claim 1, wherein the amount of fluorine gas used for the fluorination ranges from 5 to 30 vol.%.